

CLAIMS

1. (Currently Amended) A method for determining a position of a mobile terminal ~~tuned~~  
~~to a first control channel~~, comprising:

transmitting a paging request to ~~the~~ a mobile terminal via ~~the~~ a first control  
channel for packet data services, the paging request indicating a circuit  
switched service;

switching from the first control channel to a second control channel for circuit-  
switched services;

~~transmitting~~ receiving a paging response from the mobile terminal via the second  
control channel; and

determining the position of the mobile terminal based on the paging response.

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2. (Original) The method of claim 1 wherein the first control channel is a packet control  
channel and the second control channel is a circuit-switched control channel.

3. (Original) The method of claim 2 wherein the first control channel is an Enhanced  
General Packet Radio Service 136 (EGPRS-136) control channel and the second  
control channel is a digital control channel.

4. (Currently Amended) The method of claim 1 further comprising:

transmitting, in response to the paging response, a release message via the  
second control channel;

~~receiving the release message~~; and

~~switching from the second control channel to the first control channel in response to the release message.~~

5. (Original) The method of claim 1 wherein the paging request is one of a hard page and a layer 3 page comprising a teleservice indication or Wide Open R-Data Transport indication.

6. (Original) The method of claim 1 wherein the determining the position of the mobile terminal based on the paging response comprises:

determining a cell in which the mobile terminal is positioned.

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7. (Currently Amended) A system for determining a position of a mobile terminal ~~tuned to a first control channel in a wireless communication network~~, comprising:

a memory that stores instructions; and

a processor ~~that executes the instructions~~ configured to:

send a paging request to ~~the~~ a mobile terminal via ~~the~~ a first control channel for packet data services, the paging request indicating that the mobile terminal is to switch to a second control channel for circuit-switched services;

receive a paging response from the mobile terminal via the second control channel; and

determine the position of the mobile terminal based on the paging response.

8. (Original) The system of claim 7 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

9. (Original) The system of claim 7 wherein the paging request is one of a hard page and a layer 3 page indicating a circuit-switched service.

10. (Original) The system of claim 7 wherein, after receiving a paging response from the mobile terminal via the second control channel, the processor sends a release message to the mobile terminal, the release message indicating that the mobile terminal may switch back to the first control channel.

11. (Original) The system of claim 7 wherein, when determining the position of the mobile terminal based on the paging response, the processor determines a cell sector in which the mobile terminal is located.

12. (Currently Amended) A computer-readable medium ~~containing~~ having instructions for ~~controlling at least one processor to perform a method for determining a position of a mobile terminal tuned to a first control channel, the method comprising~~ to control a processor to:

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sending send a paging request to the a mobile terminal via the a first control channel for packet data services, the paging request indicating that the mobile terminal is to switch to a second control channel for circuit switched services;

receiving receive a paging response from the mobile terminal via the second control channel; and

determining determine the position of the mobile terminal based on the paging response.

13. (Original) The computer-readable medium of claim 12 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

14. (Original) The computer-readable medium of claim 12 wherein the paging request is one of a hard page and a layer 3 page comprising a teleservice indication or Wide Open R-Data Transport indication.

15. (Currently Amended) The computer-readable medium of claim 12 wherein responsive to the paging response from the mobile terminal, the method further comprises instructions further control the processor to:

~~sending, after receiving a paging response from the mobile terminal via the second control channel, send~~ a release message to the mobile terminal, ~~the release message indicating that the mobile terminal may switch back to the first control channel.~~

16. (Currently Amended) A method for determining a position of a mobile terminal ~~tuned to a first control channel, comprising:~~

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Cont. transmitting a paging request to the mobile terminal via ~~the a~~ first control channel for packet data services, the paging request indicating a circuit switched service;

switching from the first control channel to a second control channel for circuit-switched services;

receiving a paging response via the second control channel from the mobile terminal;

transmitting a position request to the mobile terminal;

receiving a position response from the mobile terminal; and

determining the position of the mobile terminal based on the position response.

17. (Original) The method of claim 16 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

18. (Original) The method of claim 16 wherein the paging request is a layer 3 page comprising a teleservice indication or a Wide Open R-Data Transport indication.

19. (Original) The method of claim 16 further comprising:

assigning, in response to receiving the paging response, one of a control channel  
and a traffic channel, and  
wherein the transmitting a position request to the mobile terminal occurs via the  
assigned channel.

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20. (Original) The method of claim 16 further comprising:

transmitting a release message after receiving the position response.

21. (Original) The method of claim 16 wherein the determining the position of the mobile terminal based on the position response comprises:

determining a cell sector in which the mobile terminal is located.

22. (Currently Amended) A system for determining a position of a mobile terminal ~~tuned to a first control channel in a wireless communication network, comprising:~~
- a memory that stores instructions; and
  - a processor ~~that executes the instructions to~~ configured to:
    - send a paging request to the mobile terminal via ~~the~~ a first control channel for  
packet data services, ~~the paging request~~ indicating that the mobile terminal is  
to switch to a second control channel; for circuit-switched services;
    - receive a paging response from the mobile terminal via the second control  
channel;
    - transmit a position request to the mobile terminal;
    - receive a position response from the mobile terminal; and
    - determine the position of the mobile terminal based on the position response.

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23. (Original) The system of claim 22 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.
24. (Original) The system of claim 22 wherein the paging request is a layer 3 page indicating a circuit-switched service.

25. (Currently Amended) The system of claim 22 wherein, ~~in response to receiving~~  
responsive to the paging response, the processor:

assigns one of a control channel and a traffic channel; to the mobile terminal; and  
~~wherein, when transmitting~~ transmits a the position request to the mobile terminal  
via the assigned channel; and  
~~the processor transmits~~ receives the position response via the assigned channel.

26. (Currently Amended) The system of claim 22 wherein, ~~when determining the~~  
~~position of the mobile terminal based on the position response,~~ the processor  
determines a cell in which the mobile terminal is located.

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Cmt. 27. (Currently Amended) A computer-readable medium ~~containing~~ having instructions  
~~for controlling~~ to control at least one processor to ~~perform a method for determining a~~  
~~position of a mobile terminal tuned to a first control channel, the method comprising:~~

~~transmitting~~ transmit a paging request to the a mobile terminal via the a first  
control channel for packet data services, the paging request indicating a  
circuit switched service;

~~receiving~~ receive a response to the paging request via a second control channel  
for circuit-switched services;

~~transmitting~~ transmit a position request to the mobile terminal;

~~receiving~~ receive a position response; and

~~determining~~ determine the position of the mobile terminal based on the position  
response.



28. (Original) The computer-readable medium of claim 27 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

29. (Original) The computer-readable medium of claim 27 wherein the paging request is a layer 3 page comprising a teleservice indication or Wide Open R-Data Transport indication.

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30. (Currently Amended) The computer-readable medium of claim 27 wherein the ~~method further comprises~~ processor is configured to:

~~assigning~~ assign, in response to receiving the paging response, one of a control channel and a traffic channel; and

~~wherein the transmitting~~ transmit a position request to the mobile terminal ~~occurs~~  
via the assigned channel.

31. (Original) The computer-readable medium of claim 27 wherein the determining the position of the mobile terminal based on the position response comprises:  
determining a cell sector in which the mobile terminal is located.

32. (New) A method of determining the position of a mobile terminal comprising:

receiving a paging request from a wireless communications network over a first control channel for packet data services, the paging request indicating a circuit switched service;  
switching from the first control channel to a second control channel for circuit-switched services; and  
transmitting a paging response over the second control channel.

AI Cont. 33. (New) The method of claim 33 further comprising suspending packet data services responsive to the paging request.

34. (New) The method of claim 33 wherein the wireless communications network determines the position of the mobile terminal based on the paging response.

35. (New) The method of claim 33 further comprising receiving a position request from the wireless communications network.

36. (New) The method of claim 35 further comprising transmitting a position response to the wireless communications network.

37. (New) The method of claim 36 wherein the wireless communications network determines the position of the mobile terminal based on the position response.

38. (New) A mobile terminal comprising:

a transceiver to communicate in a voice mode and a packet data mode; and  
a processing unit communicatively connected to the transceiver and configured  
to:

receive a paging request from the wireless communications network over a  
first control channel for packet data services, the paging request indicating  
a circuit switched service;

switch to a second control channel for circuit-switched services responsive to  
the paging request over the first control channel; and

transmit a paging response to the wireless communications network over the  
second control channel.

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39. (New) The mobile terminal of claim 38 wherein the processor is configured to  
suspend a packet data session responsive to the paging request.

40. (New) The mobile terminal of claim 38 wherein the processor is configured to  
receive a position request from the wireless communications network.

41. (New) The mobile terminal of claim 40 wherein the processor is configured to  
transmit a position response to the wireless communications network.

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